IN THE CLAIMS:

No claims have been amended. All of the pending claims 1 through 93 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended. New claims 79-93 have been added.

**Listing of Claims:**

1. (Previously Presented) A fire suppression system, comprising:

a gas generant formulated to pyrotechnically produce an inert gas mixture suitable for extinguishing a fire; and

a heat management system.

2. (Original) The fire suppression system of claim 1, further comprising an igniter composition in contact with the gas generant.

3. (Original) The fire suppression system of claim 2, wherein the igniter composition is formulated to produce an amount of heat sufficient to ignite the gas generant.

4. (Original) The fire suppression system of claim 2, wherein the igniter composition is formulated to produce at least one gaseous combustion product and at least one solid combustion product when combusted.

5. (Original) The fire suppression system of claim 1, wherein the gas generant is formulated to produce minimal amounts of carbon monoxide, particulates, or smoke when combusted.

6. (Original) The fire suppression system of claim 1, wherein the gas generant is formulated to produce less than an Immediately Harmful to Life or Health value of ammonia, carbon monoxide, carbon dioxide, or nitrogen oxides.

7. (Original) The fire suppression system of claim 1, wherein the gas generant is formulated to produce less than 1 percent of an original weight of the gas generant in particulates or smoke.

8. (Previously Presented) The fire suppression system of claim 7, wherein substantially all of the at least one gaseous combustion product forms the inert gas mixture.

9. (Previously Presented) The fire suppression system of claim 4, wherein the at least one solid combustion product is formulated to minimize production of particulates during combustion of the gas generant.

10. (Previously Presented) The fire suppression system of claim 4, wherein the at least one solid combustion product is a slag.

11. (Original) The fire suppression system of claim 1, wherein the inert gas mixture comprises nitrogen and water.

12. (Previously Presented) The fire suppression system of claim 1, wherein the gas generant comprises an oxidizer, a fuel, and a binder.

13. (Previously Presented) The fire suppression system of claim 1, wherein the gas generant is formed into a geometry that provides a neutral burn when combusted.

14. (Original) The fire suppression system of claim 1, wherein the gas generant further comprises at least one of an oxidizing agent, an ignition enhancer, a ballistic modifier, a slag enhancing agent, a cooling agent, or a binder.

15. (Original) The fire suppression system of claim 1, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

16. (Original) The fire suppression system of claim 1, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

17. (Original) The fire suppression system of claim 1, wherein the heat management system is configured to reduce the temperature of the inert gas mixture.

18. (Original) The fire suppression system of claim 1, wherein the heat management system comprises a heat sink.

19. (Original) The fire suppression system of claim 1, wherein the heat management system comprises a phase change material.

20. (Original) The fire suppression system of claim 19, wherein the phase change material comprises lithium nitrate, sodium nitrate, potassium nitrate, or mixtures thereof.

21. (Original) The fire suppression system of claim 19, wherein the fire suppression system is configured to transfer heat from the inert gas mixture to the phase change material.

22. (Original) The fire suppression system of claim 1, wherein the fire suppression system is configured to disperse the inert gas mixture therefrom within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

23. (Original) The fire suppression system of claim 1, further comprising at least one diffuser plate to disperse the inert gas mixture.

24. (Original) The fire suppression system of claim 23, wherein the at least one diffuser plate is configured and positioned to diffuse the inert gas mixture into the heat management system.

25. (Original) The fire suppression system of claim 23, wherein the at least one diffuser plate is configured and positioned to disperse the inert gas mixture exiting from the fire suppression system.

26. (Previously Presented) A fire suppression system, comprising:
a combustion chamber containing at least one pellet comprising a gas generant, the gas generant pyrotechnically producing an inert gas mixture suitable for extinguishing a fire; and
an effluent train comprising a heat management system.

27. (Original) The fire suppression system of claim 26, wherein the combustion chamber comprises an igniter composition in contact with the gas generant.

28. (Original) The fire suppression system of claim 27, wherein the igniter composition is formulated and of sufficient mass to produce an amount of heat sufficient to ignite the gas generant.

29. (Original) The fire suppression system of claim 27, wherein the igniter composition comprises from approximately 15% to approximately 30% boron and from approximately 70% to approximately 85% potassium nitrate.

30. (Original) The fire suppression system of claim 27, wherein the igniter composition comprises strontium nitrate, magnesium, and an organic binder.

31. (Original) The fire suppression system of claim 27, wherein the igniter composition is formulated to produce solid combustion products when combusted.

32. (Original) The fire suppression system of claim 26, wherein the at least one pellet is formed into a shape that provides a neutral burn.

33. (Original) The fire suppression system of claim 26, wherein the at least one pellet further comprises an igniter composition.

34. (Original) The fire suppression system of claim 33, wherein the igniter composition and the gas generant are compressed together in the at least one pellet.

35. (Previously Presented) The fire suppression system of claim 26, wherein the at least one pellet has a total mass sufficient to produce an amount of the inert gas mixture sufficient to extinguish the fire.

36. (Original) The fire suppression system of claim 26, wherein the gas generant is formulated to produce minimal amounts of carbon monoxide, particulates, or smoke when combusted.

37. (Original) The fire suppression system of claim 26, wherein the gas generant is formulated to produce less than an Immediately Harmful to Life or Health concentration of ammonia, carbon monoxide, carbon dioxide, or nitrogen oxides and less than 1 percent of an original weight of the gas generant in particulates or smoke.

38. (Original) The fire suppression system of claim 26, wherein the gas generant is formulated to produce at least one gaseous combustion product and at least one solid combustion product when combusted.

39. (Original) The fire suppression system of claim 38, wherein substantially all of the at least one gaseous combustion products form the inert gas mixture.

40. (Original) The fire suppression system of claim 38, wherein the at least one solid combustion product is formulated to minimize production of particulates during combustion of the gas generant.

41. (Original) The fire suppression system of claim 38, wherein the at least one solid combustion product produced by combustion of the gas generant is a slag.

42. (Original) The fire suppression system of claim 41, wherein the slag is present on a surface of the at least one pellet.

43. (Original) The fire suppression system of claim 26, wherein the inert gas mixture comprises nitrogen and water.

44. (Previously Presented) The fire suppression system of claim 26, wherein the gas generant comprises an oxidizer, a fuel, and a binder.

45. (Original) The fire suppression system of claim 26, wherein the gas generant further comprises at least one of an oxidizing agent, an ignition enhancer, a ballistic modifier, a slag enhancing agent, a cooling agent, or a binder.

46. (Original) The fire suppression system of claim 26, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

47. (Original) The fire suppression system of claim 26, wherein the gas generant comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

48. (Original) The fire suppression system of claim 26, wherein the heat management system is configured to reduce the temperature of the inert gas mixture.

49. (Original) The fire suppression system of claim 26, wherein the heat management system comprises a heat sink.

50. (Original) The fire suppression system of claim 26, wherein the heat management system comprises a phase change material.

51. (Original) The fire suppression system of claim 50, wherein the phase change material comprises lithium nitrate, sodium nitrate, potassium nitrate, or mixtures thereof.

52. (Original) The fire suppression system of claim 50, wherein heat from the inert gas mixture is transferred to the phase change material.

53. (Original) The fire suppression system of claim 26, wherein the fire suppression system is configured to disperse the inert gas mixture therefrom within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

54. (Original) The fire suppression system of claim 26, further comprising at least one diffuser plate to disperse the inert gas mixture.

55. (Original) The fire suppression system of claim 54, wherein the at least one diffuser plate is configured and positioned to diffuse the inert gas mixture into the heat management system.

56. (Original) The fire suppression system of claim 54, wherein the at least one diffuser plate is configured and positioned to disperse the inert gas mixture exiting from the fire suppression system.

57. (Original) A method for fighting a fire in a space, comprising:

igniting a gas generant to produce an inert gas mixture that comprises minimal amounts of carbon monoxide, particulates, or smoke when combusted; and

introducing the inert gas mixture into a space.

58. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises pyrotechnically igniting the gas generant to produce the inert gas mixture.

59. (Original) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprising minimal amounts of carbon monoxide, particulates, or smoke comprises igniting the gas generant to produce nitrogen and water.

60. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting a nonazide gas generant composition that produces gaseous combustion products and solid combustion products.

61. (Previously Presented) The method of claim 60, wherein igniting a gas generant to produce an inert gas mixture comprises forming the inert gas mixture with substantially all of the gaseous combustion products produced by the gas generant.

62. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises generating gaseous combustion products within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

63. (Original) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing gaseous combustion products that are substantially free of carbon-containing gases or nitrogen oxides.

64. (Original) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing a neutral burn of the gas generant.

65. (Original) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting an igniter composition to produce sufficient heat to ignite the gas generant.

66. (Previously Presented) The method of claim 65, wherein igniting the igniter composition comprises igniting an igniter composition comprising from approximately 15% to approximately 30% boron and from approximately 70% to approximately 85% potassium nitrate.

67. (Previously Presented) The method of claim 65, wherein igniting an igniter composition comprises igniting the igniter composition comprising strontium nitrate, magnesium, and an organic binder.

68. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing a minimal amount of the particulates or the smoke.

69. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises producing solid combustion products that minimize the particulates and the smoke formed by the gas generant.

70. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

71. (Previously Presented) The method of claim 57, wherein igniting a gas generant to produce an inert gas mixture comprises igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

72. (Original) The method of claim 57, wherein introducing the inert gas mixture into a space comprises dispersing the inert gas mixture into the space within from approximately 20 seconds to approximately 60 seconds after ignition of the gas generant.

73. (Original) The method of claim 57, further comprising reducing a temperature of the inert gas mixture after combustion of the gas generant.

74. (Original) The method of claim 73, wherein reducing a temperature of the inert gas mixture after combustion of the gas generant comprises exposing the inert gas mixture to a heat management system.

75. (Original) The method of claim 74, wherein exposing the inert gas mixture to a heat management system comprises flowing the inert gas mixture into a heat sink.

76. (Original) The method of claim 74, wherein exposing the inert gas mixture to a heat management system comprises flowing the inert gas mixture over a phase change material.

77. (Original) The method of claim 57, further comprising extinguishing the fire by reducing an oxygen content in the space.

78. (Original) The method of claim 77, wherein extinguishing the fire by reducing an oxygen content in the space comprises reducing the oxygen content to approximately 13% by volume.

79. (New) The fire suppression system of claim 15, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

80. (New) The fire suppression system of claim 15, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

81. (New) The fire suppression system of claim 16, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

82. (New) The fire suppression system of claim 16, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

83. (New) The fire suppression system of claim 46, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

84. (New) The fire suppression system of claim 46, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

85. (New) The fire suppression system of claim 47, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

86. (New) The fire suppression system of claim 47, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

87. (New) The method of claim 70, wherein igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide comprises igniting the gas generant that comprises recrystallized hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

88. (New) The method of claim 70, wherein igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide comprises igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate having less than approximately 0.1% of activated charcoal or carbon, cuprous oxide, and titanium dioxide.

89. (New) The method of claim 71, wherein igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide comprises igniting the gas generant that comprises recrystallized hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

90. (New) The method of claim 71, wherein igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide comprises igniting the gas generant that comprises hexa(ammine)cobalt(III)-nitrate having less than approximately 0.1% of activated charcoal or carbon, cupric oxide, titanium dioxide, and polyacrylamide.

91. (New) A gas generant comprising hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

92. (New) The gas generant of claim 91, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

93. (New) The gas generant of claim 91, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.